Appendix C

Environmental Awareness

All leaders and soldiers have specific duties and responsibilities concerning protection of the environment. Not all leaders are required to be environmental experts; however, they must be aware of and responsive to environmental compliance and prevention issues. Environmental stewardship is an inherent responsibility of national service for all Army personnel. This appendix provides an overview of responsibilities and duties necessary to build a foundation of basic environmental awareness. Throughout are references to material for further reading. Research these other documents to obtain a complete explanation of legal and ethical responsibilities. All training and operations must be closely coordinated with the installation's environmental office and environmental attorney to ensure compliance with all federal, state, and local requirements.

SECTION I – ARMY ENVIRONMENTAL AWARENESS

GENERAL POLICY STATEMENTS

C-01. The Army's environmental vision states: "The Army will be a national leader in environmental and natural resource stewardship for present and future generations as an integral part of our mission". To achieve this vision, the Army's environmental strategy places a high priority on sustained compliance with all environmental laws; takes into account the restoration of previously contaminated sites; focuses on pollution prevention; and accounts for the conservation and preservation of natural resources.

C-02. The Army environmental ethic calls for the chain of command to establish and support a stewardship climate which supports *compliance*, obeying the law; *prevention*, the concept of reduce, reuse, recycle; *conservation*, control and protection of natural resources; and *restoration*, the cleanup of contaminated areas. This ethic requires realistic, effective training – based on identification of the environmental realities and implementation of adequate protective measures. This ethic views our training areas as valuable multi-use resources that will lose their intrinsic training and health and welfare value unless they are properly managed and protected from excessive wear and tear.

C-03. All Army personnel should become familiar with these policy statements; they are established so that our natural environment will be available for present and future generations. Complete information regarding these polices can be obtained in Section II of *The Field Artillery Guide to Environmental Considerations*.

SECTION II – FA BATTALION ENVIRONMENTAL CONSIDERATIONS

FIELD ACTIVITIES

C-04. A FA battalion is a highly effective, lethal combat force that requires large areas of land for training. The vehicles, weapons, ammunition, materials, and types of operations required for effective training can present a threat to our environment unless they are employed prudently and in consideration of environmental preservation. This section will identify and address the various preventive measures that can be utilized in order to decrease possible environmental damage while allowing realistic training.

C-05. Key field environmental considerations include, but are not limited to, the following:

- Wheeled and tracked combat vehicles should stay on established roads, trails, firing points, and firebreaks, unless conducting specific cross-country maneuver exercises. Additionally, confine pivot turns and neutral steers to the middle of the roadway.
- Follow land contours rather than driving up and down hills or along creeks.
- In order to minimize siltation of streams; use bridges or low water crossings when crossing permanent streams. If crossing through a stream becomes necessary, then do so by the most direct route (90-degree angle).
- Establish refueling and maintenance areas away from wetlands, drainage areas, and near or over water sources.
- Federal law prohibits the removal of artifacts from federal property. Do not excavate, remove, damage, or otherwise alter or deface any archaeological resource located on a military reservation.
- Avoid and mark off-limit areas for known archaeological sites during military training exercises. Penalties can be up to $250,000 for knowingly disturbing a site.
- Be aware of and avoid nesting, bedding, and habitats of all species of birds and animals. Mark as off-limits, designated threatened or endangered species areas.
- Use camouflage netting instead of live vegetation.
- When planning training activities, conform to installation and community noise-abatement regulations. Identify and mark the off-limit boundaries.
- Open fires, such as burning of garbage, refuse, and rubbish are not allowed on range areas. For burning excess powder increments (cannon units), use only designated powder burn sites.
- Conform to field sanitation and medical standards when using soakage pits for wash water, liquid kitchen wastes, and grease traps per FM 21-10, *Field Hygiene and Sanitation*.
- Establish field satellite-accumulation site and procedures.
- Police field locations and establish field trash-collection point and procedures. Remove materials packed into training areas on departure from the training areas.

- When the training exercise is complete, repair any field damage such as ruts from vehicles, foxholes, and other emplacements.
- Conduct all training with a concern for conservation and future use of range training areas.

MUNITIONS

C-06. The point at which munitions are considered wastes is a matter of law and regulation for the area where the installation is located. The summary below is a generic review of requirements of the Resource Conservation Recovery Act (RCRA) Munitions Rule that has been adopted in many states. Since rules and guidelines vary based on location, units should consult with the local installation's environmental program and legal staff concerning possible munitions waste.

- Munitions and ordnance are not considered wastes when used for their intended purpose. Intended use includes:
  - Use in training activities, including training in the proper destruction of unused propellant bags/increments or other munitions (this includes the burning of excess propellant bags/increments that occurs during live-fire FA cannon training);
  - Use in research, development, testing, and evaluation of munitions, weapons, or weapons systems;
  - Recovery, collection, and on-range destruction of unexploded ordnance and munitions fragments during range clearance activities;
  - Unused munitions or components are being repaired, reused, recycled, reclaimed, disassembled, reconfigured, or otherwise subject to materials recovery activities.
- Unused munitions are considered waste when:
  - Abandoned by being disposed of, burned, detonated (except during intended use), incinerated, or treated prior to disposal; or
  - Removed from storage for the purpose of being disposed of, burned, or incinerated, or treated prior to disposal; or
  - Deteriorated or damage to the point it cannot be put into serviceable condition and cannot be recycled or used for other purposes; or
  - Declared a waste by authorized military personnel.
- Used or fired munitions are considered waste when:
  - Transported off range for purposes of storage, reclamation, treatment, disposal, or treatment prior to disposal; or
  - Recovered, collected, and then disposed of by burial or landfilling either on or off range; or
  - Fired off-range and not promptly rendered safe and/or retrieved.

HAZARDOUS MATERIAL AND HAZARDOUS WASTE

C-07. The RCRA is the framework for managing hazardous waste and has established standards for identifying, classifying, and storing of these wastes. RCRA regulations require those involved in managing hazardous substances to be properly trained, and the training to be properly documented. Units needing to transport hazardous substances should contact their installation

environmental officer and/or DRMO to ensure compliance with the Hazardous Materials Transportation Act.

C-08. Key hazardous material and hazardous waste environmental considerations include, but are not limited to, the following items:

- Personnel dealing with hazardous materials must be trained in proper handling, containment, cleanup, and reporting procedures.
- A Material Safety Data Sheet (MSDS) must be on file, and made available to all personnel regarding hazardous material.
- Hazardous waste containers must be kept closed when not in use, free of rust and leaks, and stored separately from incompatible wastes.
- Incompatible wastes must never be transported on the same vehicle.
- Never allow the accumulation of more than 55 gallons of a hazardous waste, or 1 quart of acutely hazardous waste, at the satellite accumulation point. (A satellite accumulation area is generally the designated area or point of generation of a hazardous waste, which will store the waste until it is sent out for processing.) Process all hazardous waste in a timely manner (label the accumulation point with the date of the accumulation to ensure the time limit is not exceeded).
- Calcium hydroxide, a by-product formed from using the hydrogen generator set (AN/TMQ-3), is an environmental hazard. Conform to installation policy when storing, handling, and disposing of this waste.
- Methanol and methanol in water is used with the hydrogen generator (AN/TMQ-42); both are hazardous materials due to flammability and toxicity. Conform to installation policy when storing, handling, and disposing of this waste.
- Bore cleaner waste (cannon units). Is a chlorinated hydrocarbon product used? If so, how is the waste disposed?
- Battery electrolyte (acid) from damaged batteries should be drained and disposed of through turn-in via installation policy and maintenance TSOP. Refer to TB 43-0134, *Battery Disposition and Disposal*, for complete procedures regarding battery handling and disposal.
- Ensure all Department of Transportation (DOT) and hazardous waste transportation requirements are met prior to transporting hazardous material or hazardous waste on public highways.
- Check with local environmental office for transportation procedures within the installation boundary.
- For more information on storing and handling of hazardous materials refer to TM 38-410, *Storage and Handling of Hazardous Materials*.

MATERIAL SAFETY DATA SHEET

C-09. A MSDS is a summary of information on a given chemical identifying material, health and physical hazards, exposure limits, and precautions. A MSDS describes the hazards of a material and provides information on how the material can be safely handled, used, and stored. Insist on receiving a copy of a MSDS when receiving a hazardous chemical from supply, and retain it for when or if you turn in the material. Periodically review each MSDS pertaining to your unit. This will assure a quick response when identifying symptoms and handling emergencies.

C-10. Unfortunately, there is no specified format for a MSDS, and it doesn't contain all known data of a chemical, but there are typical components. These are outlined in 29 Code of Federal Regulations (CFR) 1910.1200. Use the following information as a guide toward what to expect on most MSDS forms.

Table C-1. Material Safety Data Sheet

SECTION/TOPIC	CONTENTS
Section 1 - General Information	Manufacturers' name and address. Trade or common name of product.
Section 2 - Hazardous Components	National Institute for Occupational Safety and Health and/or Chemical Abstract System Number. Chemical name and percentage.
Section 3 - Physical Properties	Boiling point, freezing point, water solubility. Appearance and odor under normal conditions.
Section 4 - Fire & Explosion Hazard	Fire-fighting equipment. Any unusual fire and explosion hazards.
Section 5 - Health Hazard	Routes of entry into the body. Emergency and first aid procedures.
Section 6 - Reactivity Data	Conditions to avoid. Incompatibility with other materials.
Section 8 - Control Measures	Recommended respiratory and ventilation. Personal protective equipment, if needed.
Section 9 - Special Precautions	Handling and storing precautions.
Section 10 - Transportation	Applicable regulations. Hazards class and required labeling.

MAINTENANCE

C-11. The BMO acts as the hazardous material/ hazardous waste (HM/HW) spill coordinator. He/she ensures the accountability, proper storage, and disposal of all HM/HW, and ensures that HM/HW spills are immediately contained and reported. Additionally, the BMO reports nonfunctional/inoperative treatment/collection facilities (such as oil/grease interceptors, floor drains, or catch basins) to the installation environmental office through the unit environmental compliance officer (ECO).

C-12. Key maintenance environmental considerations include, but are not limited to, the following:

- Motor maintenance areas require TSOPs and close monitoring. Maintenance operations are continuous sources of minor pollution to storm drainage systems due to the constant threat of a spill of fuel or oil. TSOPs for prevention or cleanup of spills should be posted in motor maintenance areas, and should be understood by all personnel involved in maintenance activities.
- Refueling operation TSOPs should address practices to minimize spills.
- Implement preventive maintenance on all heavy equipment to ensure petroleum products will not be released from the belly pan.
- Ensure pollutants are not discharged into storm or washrack drains or poured on the ground or along fence lines. Some common pollutants are oil, solvents, soap, diesel, gasoline, battery acid, chemicals, waste antifreeze, paint, and grease.

- Parts containing asbestos, such as brake shoes, clutch plates, and equipment insulation, should be removed, collected, and disposed according to installation policy.
- The least hazardous or preferably, non-hazardous material to perform a function should be used, unless previous research of options clearly indicates otherwise. The Defense Logistics Agency (DLA) produces a manual, *Environmental Products*, to assist in this process.
- Do not mix fuel, oil, or antifreeze together. This is considered a mixed waste.

SUPPLY

C-13. The supply sergeant is required to have a complete inventory of HM/HW generated by the unit. He/she must also know what chemicals the unit requires, where and how they are stored, how much hazardous waste is generated, and necessary spill response procedures. The supply sergeant should coordinate with the unit S3 or ECO to ensure this information is incorporated into the unit TSOP.

C-14. Key supply environmental considerations include, but are not limited to, the following items:

- Requisition only supplies needed and authorized, avoid excessive stockpiling of materials.
- Maintain an accurate inventory in unit TSOP of hazardous waste used by the generating unit. This listing should include waste by volume, type, generating process, and location.
- Use of used oil tanks for disposal of solvents, antifreeze, or other HM/HW is against regulation. Storage of hazardous material must be in clearly marked DOT-approved containers.
- Actively support a unit-recycling program.
- Ensure tires and batteries are properly turned in for recycling.
- Ensure used batteries are turned in on a one-for-one basis.

SPILL RESPONSE

C-15. Generally, only persons specifically trained to respond to a spill should handle unit spills. However, all personnel must, at a minimum, report the spill, and be aware of the following four basic steps to spill response:

- Protect yourself. Use personal protective equipment specified in the MSDS.
- Stop the flow. This may be as simple as placing the container upright or closing a valve.
- Contain the spill. Place absorbent material around the spill, and protect drains and ditches.
- Report the spill. Notify supervisor, and other key personnel. Also, notify applicable federal, state, and local environmental regulatory agencies if the amount of spilled material exceeds reportable quantities specified by the regulators.

C-16. Each unit is responsible for the cleanup of their own spills, as long as no personnel are put in danger. After the above four steps are completed, take the necessary steps to cleanup the spill. Information on cleanup procedures can be found on the MSDS, and unit TSOP. Also, the unit must contact installation environmental staff for guidance. Turn in the spilled material and absorbent to the Defense Reutilization Marketing Office (DRMO), or another designated point if a DRMO is not available. Also, ensure there are adequate spill supplies on-hand for future use.

C-17. Key spill prevention, response, and cleanup considerations include, but are not limited to, the following items:

- A spill prevention and response section must be included in the unit TSOP outlining installation spill plan requirements. Unit spill contingency procedures for spills of oil, fuel, or other hazardous materials or wastes must comply with response and reporting requirements of local, state, and federal environmental regulatory agencies.
- Each unit must maintain a spill cleanup kit near any satellite-accumulation area, or where a potential for spill exists. The kit must contain, at a minimum, absorbent material, shovel, brooms, gloves, and appropriate containers. Units that have a potential for release or spill that may impact streams must also maintain booms for containment.
- Drip pans must be used under vehicles and equipment where spills are likely to occur.
- All topsoil contaminated with oil must be removed, properly disposed, and replaced by the unit. While awaiting disposal, keep the excavated soil covered to prevent runoff in case of rain.

SECTION III – REGULATORY REQUIREMENTS

LAWS AND REGULATIONS

C-18. Military facilities are subject to federal, state, local, and host nation environmental laws. When the requirements differ, the most stringent law applies. Ignorance of environmental laws is not an excuse for non-compliance, and it will not protect commanders, soldiers, or the military services from civil and criminal liability. Figure C-1 lists the federal and military laws and regulations that are frequently encountered by Army personnel; however, it is not inclusive of all requirements.

C-19. Additionally, environmental law varies with differing countries, states, and cities. What is legal in one area may be illegal in another. Commanders and trainers should consult with their installation environmental office to ensure they are knowledgeable of local regulations and policies.

C-20. Army units outside the United States that are not subject to federal environmental regulations decreed by the Environmental Protection Agency (EPA) should comply with the final governing standards of the host nation. In areas where a host nation has minimal or no environmental laws and regulations, comply with the *Overseas Environmental Baseline Guidance Document* provided by the Department of Defense, AR 200-1, *Environmental Protection and Enhancement*, and AR 200-2, *Environmental Effects of Army Actions*.

Army Regulations
AR 200-1. Environmental Protection and Enhancement
AR 200-2. Environmental Effects of Army Actions
AR 200-3. Natural Resources-Land, Forest and Wildlife Management
AR 200-4. Cultural Resources Management
AR 420-49. Solid and Hazardous Waste Management
AR 420-76. Pest Management

Executive Orders
EO 11989. Use of off-road vehicles on public land
EO 11990. Wetland protection
EO 12114. Effects of federal actions abroad
EO 12196. Occupational Safety and Health Administration compliance for federal employees
EO 12580. CERCLA duties and powers
EO 13101. Pollution prevention and recycling

Federal Laws
Archaeological Protection Act of 1979
Clean Air Act of 1970
Clean Water Act of 1972
Comprehensive Environmental Response And Liability ACT (CERCLA) of 1980
Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986
Endangered Species Act of 1973
Federal Facilities Compliance Act of 1992
Haz. Materials Transportation Act of 1975
National Environmental Policy Act of 1969
National Historic Preservation Act of 1966
Noise Control Act of 1972
Oil Pollution Act of 1990
RCRA of 1976
Toxic Substances Control Act of 1976

Figure C-1. Environmental Laws and Regulations

REGULATORY TRAINING REQUIREMENTS

C-21. Commanders must be aware of, and comply with requirements for environmental training. This training may be at the awareness level for all personnel or at a more specialized level designed for specific personnel. The installation environmental and safety offices can best assist in determining your training requirements and who to contact for additional information. Table C-2 is provided as a reference of possible training requirements for the FA battalion.

Table C-2. Regulatory Training Requirements

NOTE: The depth or level of training will vary between target audiences. For example, K and E will need in-depth training, while A will only require broad overviews. The letters K, E, N, or A denotes target audience, and are listed below:

Knowledge	Personnel who administer, implement, or comply with contents of regulations such as program manager and technicians in the environmental field. Also includes organizations that need in-depth knowledge of the environmental laws/regulations/programs, such as staff judge advocates.
Executors	All personnel who supervise or actually handle responsibilities dealing with environmental programs, to include ECOs, technicians, and workers. Also includes unit personnel required to execute responsibilities with environmental ramifications as part of their mission.
Need to Know	Personnel who may encounter environmental issues as part of their mission. This may include personnel within the following activities: engineers; designers; emergency personnel; safety; reserve components; first-line supervisors; crew chiefs; NCO's; and various unit personnel as identified by the installation environmental office and their supervisors
Awareness	Public affairs offices, reserve components, other unit personnel.

Training Topic	Regulatory Reference	K	E	N	A
Hazardous Materials/Waste Compliance Training	29 CFR 1200; 40 CFR 262.34, 264.16, 265.16; 49 CFR 172	*	*	*	*
Hazardous Waste Operations (HAZWOPER) for Installation Restoration (IR)	29 CFR 1910.120	*	*		
HAZWOPER for Treatment Storage and Disposal Facilities	29 CFR 1910.120	*	*		
Emergency Response to Hazardous Materials Incidents/Hazardous Material Technician	29 CFR 1910.120	*	*	*	
National Environmental Policy Act (NEPA)	NEPA of 1969	*			*
National Historic Preservation Act (NHPA)	36 CFR part 800, 36 CFR part 63, NHPA of 1966	*			*
Archaeological Resources Protection Act (ARPA)	43 CFR 7.7 (4) ARPA of 1979	*			
Native American Graves Protection and Repatriation Act (NAGPRA)	NAGPRA of 1990	*			
EPCRA/Superfund Amendment Reauthorization Act (SARA)	EPCRA/SARA 1986 Title 3, Executive Order 12856	*	*	*	*
Lead Based Paint	Lead Based Paint Exposure Reduction Act of 1992, 24 CFR 35	*	*	*	*
Asbestos	40 CFR part 763, 40 CFR 61 part M	*	*	*	*
Endangered Species Act (ESA)	ESA 1973 as amended, 50 CFR par 402	*			*
Clean Water Act (CWA)	CWA S 311	*	*		*

Table C-2. Regulatory Training Requirements (Continued)

Training Topic (Continued)	Regulatory Reference	K	E	N	A
Storm Water Pollution Prevention Planning	CWA S 319	*	*	*	
Chloroflourocarbon (CFC)/Halon Refrigerants	EO 11051, 40 CFR 82.40, 40 CFR 282, 58 FR 92 (p. 28660)		*	*	*
Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)	FIFRA of 1972, 40 CFR 265.16, SARA of 1986		*		
Solid Waste Management	40 CFR 240-257/RCRA Subtitle D	*			*
Underground Storage Tanks	40 CFR part 280, RCRA Subtitle I	*			
National Pollutant Discharge Elimination System (NPDES)	CWA of 1990, 40 CFR 122-129	*	*		*
Confined Space Entry	29 CFR 1910.146	*	*	*	*
Occupational Respiratory Protection	29 CFR 1926.58, 29 CFR 1910.134	*	*		
Occupational Exposures to Bloodborne Pathogens	29 CFR 1910.1030	*	*	*	*
Storm Water Compliance	40 CFR 122-129, WPCA S 319	*	*		
Hazard Communication Standard	29 CFR 1910.1200	*	*	*	*
Department of Transportation	49 CFR172.704	*	*	*	*

ENVIRONMENTAL COMPLIANCE OFFICER RESPONSIBILITIES

C-22. It is the unit commander's duty to appoint an ECO and a Hazardous Waste Coordinator; the same person can serve in both positions, per AR 200-1. These appointments are made to ensure that environmental compliance occurs at the unit level. Appointed personnel:

- Should receive formal training and act as an advisor on environmental regulatory compliance during training, operations, and logistics functions.
- Will be the commander's eyes and ears for environmental matters, as the Safety Officer/NCO is for safety matters.
- Should function as the liaison between the unit and higher headquarters regarding environmental matters such as training requirements, equipment, or supplies that unit personnel need.
- Should inspect HM/HW accumulation sites, and ensures that soldiers handling these materials are properly trained.
- Ensure the unit's TSOP covers environmental considerations, conservation, natural resources, pollution prevention, HM/HW, and spill procedures.
- Support the Army's pollution prevention/recycling program.
- Report hazardous material and waste spills immediately.
- Conduct environmental self-assessments or internal environmental compliance assessments.
- Meet with installation environmental points of contact periodically to remain updated on any regulatory changes.

SECTION IV – ENVIRONMENTAL RISK MANAGEMENT

ENVIRONMENTAL RISK MANAGEMENT

C-23. Leaders at all levels are required to make timely and appropriate decisions regarding the environment. Failure to do so may negatively impact the training environment, which could then lead to personal liability of individuals directly involved, the chain of command, and the US Army. All leaders must properly manage, assess, and reduce environmental risks.

THE FIVE-STEP PROCESS

C-24. Risk management is a five-step process designed to provide leaders a methodology for the identification, assessment, control, and evaluation of environmental risks. The following is a summary of these steps from FM 20-400, *Military Environmental Protection*, and FM 100-14, *Risk Management*. Refer to these manuals for detailed information.

STEP 1. IDENTIFY HAZARDS

C-25. Environmental hazards include all activities that may pollute, create negative noise-related effects, degrade archeological/cultural resources, or negatively affect threatened or endangered species habitats. A listing of common environmental hazards is located in Table C-3.

Table C-3. Common Environmental Hazards

MEDIA AREA	COMMON ENVIRONMENTAL HAZARDS
Air	Equipment exhaust, convoy dust, range fires, open-air burning, pyrotechnics, smoke pots/grenades, part-washer emissions, paint emissions, air-conditioner or refrigeration CFCs, HM/HW release, pesticides, other toxic industrial chemicals or material.
Archeological and cultural	Maneuvering and digging in sensitive areas, disturbing or removing artifacts, demolition/munitions effects, HM/HW spills.
Noise	Low-flying aircraft (helicopters), demolition/munitions effects, nighttime operations, operations near post/camp boundaries and civilian populations, vehicle convoys/maneuvers, large-scale exercises.
Threatened and/or endangered species	Maneuvering in sensitive areas, demolition/munitions effects, especially during breeding seasons, disturbing habitat or individual species, HM/HW spills or releases, poor field sanitation, improper cutting of vegetation, damage to coral reefs,
Soil (terrain)	Over use of maneuver areas, demolition/munitions effects, range fires, poor field sanitation, poor maneuver-damage control, erosion, troop construction effect, refueling operations, HM/HW spills, maneuver in ecologically sensitive areas such as wetlands and tundra, industrial waste runoff, pesticide accumulation in soil, vegetation, and terrestrial organisms.
Water	Refueling operations near water sources, HM/HW spills, erosion and unchecked drainage, amphibious/water-crossing operations, troop construction effects, poor field sanitation, washing vehicles at unapproved sites.

STEP 2. ASSESS ENVIRONMENTAL HAZARDS TO DETERMINE RISK

C-26. A risk assessment is a tool used for evaluating the most pressing or most hazardous potential environmental damage. It considers two factors; probability, how often a hazard is likely to occur; and severity, the effect in degrees a hazard will have on personnel, equipment, environment, and mission. Unit leaders should conduct risk assessments before conducting any

training, operations, or logistical activities that are not addressed in the TSOP, or when conditions differ significantly from the TSOP. Complete information on environmental risk assessments can be obtained from FM 20-400.

STEP 3. DEVELOP CONTROLS AND MAKE A DECISION

C-27. This step is designed to reduce the probability or severity of each hazard, which in turn lowers the overall risk. Control types fall in the categories of educational, physical, or avoidance. Table C-4 outlines examples of environmental controls.

Table C-4. Environmental-related Controls

CONTROL TYPE	ENVIRONMENTAL-RELATED EXAMPLES
Educational	• Conduct unit environmental-awareness training. • Conduct an environmental briefing before deployment. • Perform tasks to environmental standards. • Review environmental considerations in AARs. • Read unit's environmental TSOPs and policies.
Physical	• Provide spill-prevention equipment. • Establish field satellite-accumulation site and procedures. • Police field locations. • Practice good field sanitation. • Post signs and warnings for off-limit areas.
Avoidance	• Maneuver around historical/cultural sites. • Establish refueling and maintenance areas away from wetlands and drainage areas. • Cross streams at approved sites. • Prevent pollution. • Limit noise in endangered and threatened species habitats.

STEP 4. IMPLEMENT CONTROLS

C-28. Leaders must inform subordinates of risk-control measures, state how each control must be implemented, and assign responsibilities. They must also ensure these controls are in place prior to the operation. This is accomplished by using the *before*, *during*, and *after* checklists and the environmental risk-assessment process. Examples of checklists can be obtained from TC 5-400, *Unit Leaders' Handbook for Environmental Stewardship*, or from the Field Artillery environmental handbook referenced in Section I, in order to determine the environmental considerations that may effect battalion training and operations.

STEP 5. SUPERVISE AND EVALUATE

C-29. Leaders should monitor controls to ensure effectiveness and whether controls require modification. They should ensure the after action review process includes an evaluation of environmental-related hazards, controls, soldier performance, and leader supervision.